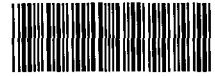


MASTER FILE

Date: 10/23/80

TDD # F1-8005-01F



SDMS DocID

476281

PRELIMINARY SITE ASSESSMENT

of

OLIN CHEMICALS GROUP PLANT

Eames Street
Wilmington, Massachusetts

Superfund Records Center

SITE: 014

BREAK: 1.2

OTHER: 476281

Submitted to:

Merrill S. Hohman, Director
Air and Hazardous Materials Division
U.S. EPA, Region I

Submitted by:

David Cook, Project Leader
Ecology and Environment, Inc. (E & E)
FIT Team, Region I

Date Submitted:

October 24, 1980

Date: 10/23/80

PRELIMINARY SITE ASSESSMENT

FOR

OLIN CHEMICAL GROUP
WILMINGTON PLANT

TDD #: F1-8005-01F

Firm Name: Olin Chemicals Group

Address: Eames Street
Wilmington, Massachusetts

Telephone: 203-356-3156

Owner: Corporation

Principal Contact at Site: Mr. David Vaughn
(Hartford Office)

Date: 10/23/80

1. Purpose of Assessment:

To gather preliminary data and assess the need for site entry and sampling of Olin Chemical Group's Wilmington Plant. Data will be used to determine potential for possible RCRA and/or 311/104 Clean Water Act actions against Olin Chemical Group.

2. Objective:

To conduct an off-site investigation of the Wilmington Plant site in order to locate evidence of contamination, identify possible contaminants and determine sampling point locations for future on-site activities.

3. Background:

3.1 Description:

The Olin Chemicals Group Wilmington Plant occupies a 53-acre site south of Eames Street in Wilmington, Massachusetts. The site is bounded on the east by the Boston and Maine railroad tracks, on the south by the Woburn-Wilmington town line, on the west by a Boston and Maine railroad spur, and on the north by Eames Street (See Figures 1 and 2). The property was purchased by Olin Chemicals Group in September, 1980 from the Stepan Chemical Company which had occupied the site since 1971. Chemical plant operations on this site began in 1953 under the ownership of National Polychemicals, Inc. which merged with Stepan Chemical Company in 1971. The northern one-half of the site is occupied by the production facilities, and the southern one-half is wooded. A drainage ditch parallel to the Boston and Maine tracks borders the east line and carries water from north to south along the project site boundary. This drainage ditch continues adjacent to the tracks until its confluence with Hall's Brook about 0.9 miles south of the site. Nearly all surface water on the site is routed to a single channel which flows into the drainage ditch, as shown in Figure 2.

Date: 10/23/80**3. Background:****3.1 Description -continued**

At the time when the aerial photograph presented in Figure 3 was taken (April 24, 1971), three acid pits existed to the south of the processing facilities. These pits have been replaced by rectangular settling basins as shown in Figure 4 (photographed on April 29, 1977). An extensive area of distressed vegetation is present in the east-central portion of the property. Also on the property are eleven large storage tanks noted in Figure 4. there are twelve wells on the property as noted in Figure 2.

3.2 Primary Site Activity:

Several chemicals have been synthesized on-site from a variety of ingredients. The processes used and the final products are as follows (quantities based on 1973 production figures):

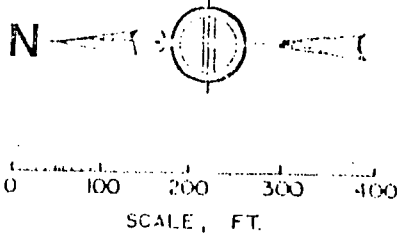
- Opex Process - Dinitropentamethylenetetramine (DNPT), a slightly water soluble solid used as a blowing agent in the production of expanded rubber compounds, 1.2 million pounds per year.
- Kempore Process - Azodicarbonamide (Kempore), also a slightly water soluble solid used as a rubber blowing agent, 1.6 to 1.8 million pounds per year.
- Wytox Process - Wytox, a liquid phosphite rubber stabilizer, one million pounds per year.
- Wytox ADP-X Process - Dioctyldiphenylamine (DODPA), a dark colored resinous solid, 600,000 pounds per year.
- O.B.S.H. Process - Oxybisbenzenesulfonylhydrazide (OBSH), a rubber blowing agent, 300,000 pounds per year.

Date: 10/23/80**3. Background:****3.2 Primary Site Activity - continued**

Raw materials and waste products for the preceeding processes are listed in Table 1. Only those waste products discharged into the yard or floor drainage system are listed. The drainage system is shown in Figure 5.

In addition to the above processes, numerous coatings for rubber products were produced on site. The following chemicals were used to produce the coatings:

- Bentone
- Santocel
- Ufamite MM 67
- Toluene
- Butylacetate
- Acrylic Resins
- Maleic Anhydride
- Glycerine
- Fatty Amines
- Silicone
- Monoethanolamine
- Mineral Oil



recycled paper

ecology and environment, inc.

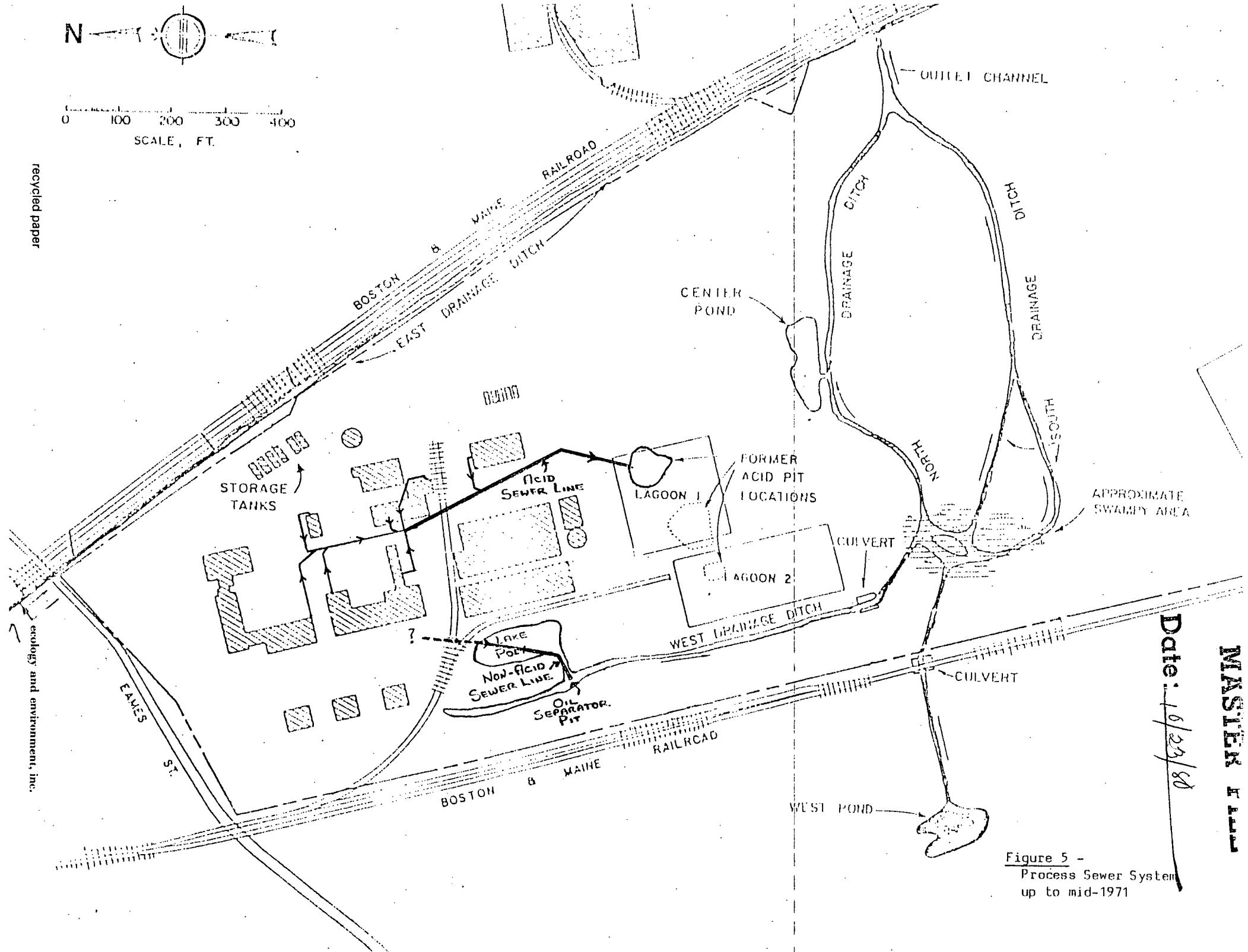


Figure 5 -
Process Sewer System
up to mid-1971

MASTER PLAN

MASTER FILE

3. Background:

Date: 10/23/80

3.2 Primary Site Activity - continued

TABLE 1 - Raw Materials and Waste Products Associated With Chemical Processes Used by National Polychemicals, Inc. and Stepan Chemical Company between 1953 and 1978.

<u>Process</u>	<u>Raw Materials</u>	<u>Waste Products</u>
Opex	anhydrous ammonia formaldehyde sodium nitrite hydrochloric acid	sodium chloride formaldehyde sodium nitrite process oil
Kempore	liquid chlorine urea sodium hydroxide sulfuric acid hydrazine	sodium sulfate sodium chloride ammonium sulfate urea sulfuric acid
Wytox	phosphorous trichloride paraformaldehyde nonyl phenol	None sewered
Wytox ADP-X	diphenylamine diisobutylene aluminum chloride	diisobutylene aluminum hydroxide sodium chloride
O.B.S.H.	diphenyloxide chlorosulfonic acid	sulfuric acid

MASTER FILE

3. Background:

Date: 10/23/80

3.2 Primary Site Activity - continued

According to MDC records, the following materials were being stored on-site as of June 30, 1980:

<u>MATERIAL BEING STORED:</u>	Annual Thruput (gals.)	Type of Storage Container (tank, drum, etc.)	Size of Container (gals.)
-------------------------------	------------------------------	--	---------------------------------

1. Formaldehyde	172,500	Tank	13,300
2. Nonyl phenol	281,600	Tank	10,000
3. Dinonyl phenol	30,500	Tank	6,700
4. Ethyl hexoic acid	18,400	Tank	5,000
5. Dioctylphthlate	54,200	Tank	15,000
6. Process Oil	11,800	Tank	4,250
7. TNPP (Wytox 312)	50,000	Tank	10,000

Chemicals used or manufactured at this site are transported in 55-gallon drums by railcar.

3.3 Secondary site activity:

Not applicable

3. Background:**Date:** 10/23/80**3.4 Hazards Identified or Alleged:**

Potential sources of contamination as a result of on-site activities past or present are the following:

1. Leaking of materials from storage tanks.
2. Leaching of materials from acid pits.
3. Leaching of materials from burial sites.
4. ~~Exfiltration from sewers.~~

A close examination of the chemicals which have been used on-site indicates that only a small number may have contributed or are contributing to an environmental hazard. Toluene and dioctylphthalate are included in the Federal Register list of priority pollutants. It is highly likely that toluene would have volatilized soon after a spill. Dioctylphthalate is very persistent and has been associated with pneumonia-like symptoms. Several other chemicals used on site including hydrazine, nonylphenol, dinonylphenol, and ethyl hexoic acid may cause undesirable symptoms. The extensive vegetative stress noted on-site is probably the result of high sodium chloride and sulfuric acid concentrations leaching from the former acid pits.

Prior to 1971, all waste materials were disposed of on-site either into a series of three acid pits or directly into a series of channels on the property. Eventually, all material either leached or drained into the ditch paralleling the Boston and Maine railroad tracks and proceeded ultimately to the Aberjona River. In 1971, disposal of wastes was changed to the system presently in use. Sulfate bearing wastes are mixed with a calcium hydroxide slurry to form a calcium sulfate sludge which is disposed of in two polyvinyl chloride (PVC)-lined lagoons. An analysis of this sludge is as follows (analyzed by National Polychemicals, Inc., September 1970):

MASTER FILE

3. Background:

Date: 10/23/80

3.4 Hazards Identified or Alleged - continued

Water	27,500 lbs.
Gypsum	26,800 lbs.
CaCO ₃	650 lbs.
Calcium Oxbisbenzene Sulfonate	Trace
Na ₂ SO ₄	Trace
Al (OH) ₃	Trace
NaCl	Trace
CaCl ₂	Trace
Formaldehyde	Trace
NaNO ₂	Trace
NH ₄ Cl	<u>Trace</u>
TOTAL	54,950 lbs. = 27.5 Tons/Day

A study performed in 1979 by Geotechnical Engineers, Inc. of Winchester, Massachusetts, indicated that several holes exist in the PVC liner (See Figures 6 to 8). It was also discovered that sludge has been dumped in an emergency lagoon when the two existing lagoons filled to capacity (See Figure 4). This emergency lagoon had no liner and was formed by dredging soil to form a roughly rectangular area. Solids from the lagoons are dredged periodically and landfilled on the southwest corner of the property. The landfill site was approved by the State Department of Environmental Quality Engineering (DEQE). The analysis of the sludge indicates that no environmental hazards would result from leaching of the lagooned or landfilled materials into the ground.

Non-sulfate bearing wastes generated on-site are presently discharged into an underground sewer line which connects to a Town of Wilmington owned sewer. This line connects to a Metropolitan District Commission (MDC) sewer line. Complaints regarding high chloride, sulfate and ammonia levels in the sewer effluent have been made on

Date: 10/23/81

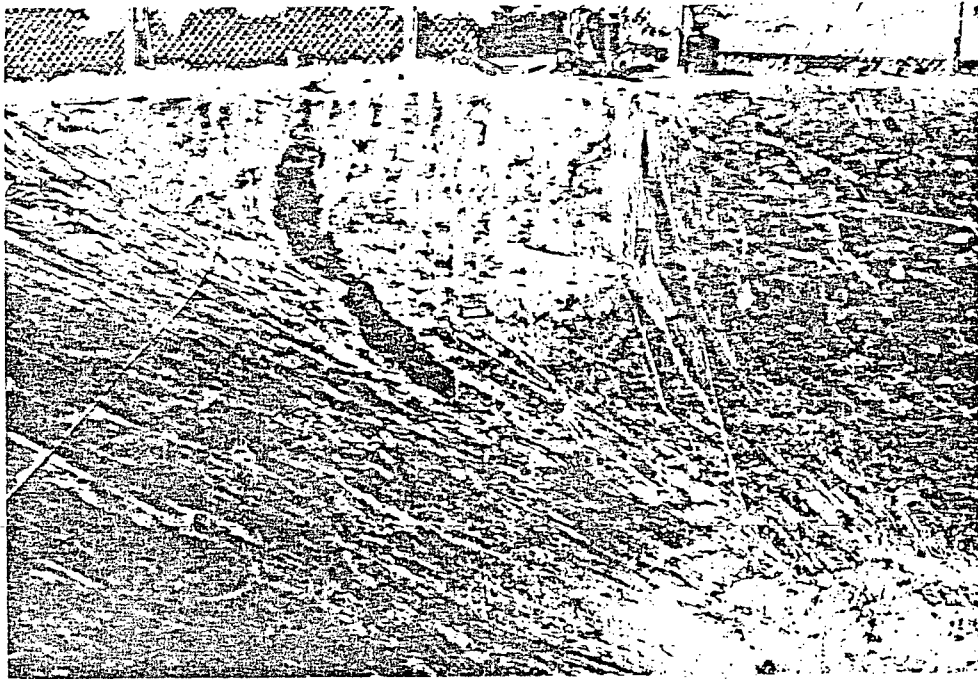


Figure 6 - Leak Along the Seam
of the Polyvinyl Chloride Liner
in the Sulfate Sludge Lagoon.



Figure 7 - Enlargement
from Figure 6.

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Date: 10/23/88

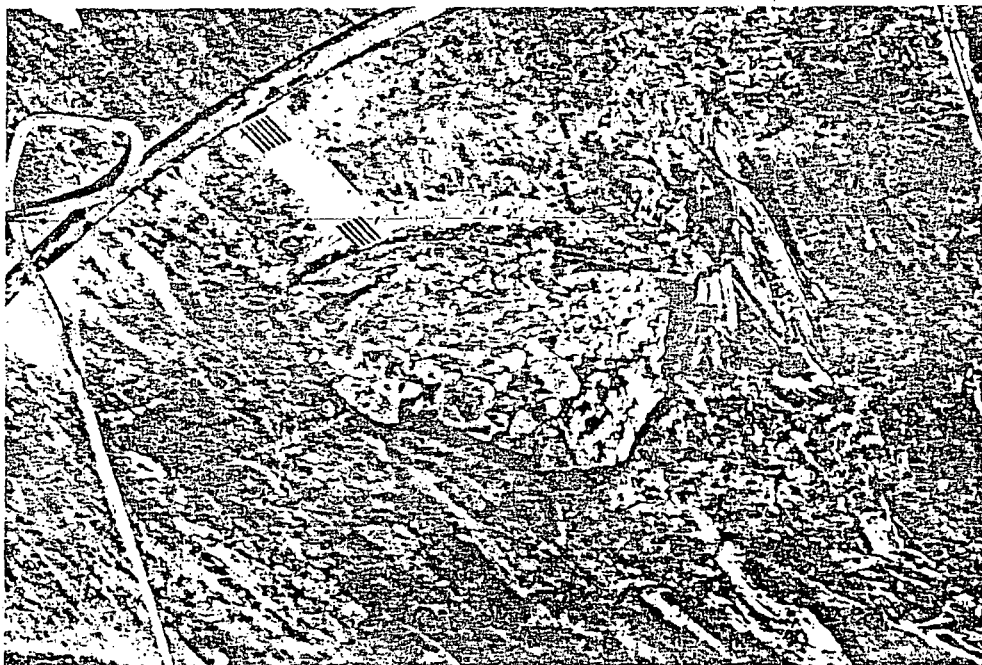


Figure 8 - Hole in the Polyvinyl
Chloride Liner Associated with
the Sulfate Sludge Lagoon.

Date: 10/23/80**3. Background:****3.4 Hazards Identified or Alleged - continued**

An unofficial report from a former Stepan employee indicates that phosphorus trichloride was often dumped directly into the ground and that residues were buried next to the wetlands near the drainage channel. Sediment and ground water samples must be taken to confirm or deny the existence of an environmental hazard resulting from such alleged activities.

A 1977 aerial photograph shows two areas where drums were stored on-site (See Figure 4). Leaks in these drums may have resulted in ground water contamination. The 1971 photo (Figure 3) also reveals a spill generating from the group of six large storage tanks on the east side of the property. Since 1973, "black ooze" has been noted seeping into the drainage ditch paralleling the railroad tracks east of the site (Figure 9). A sample was taken by the E & E, FIT team on October 2, 1980, (See memo to John Hackler from David Cook dated October 6, 1980), and the analysis should be available by the end of October.

The drainage ditch mentioned above has been the object of sampling and analysis on several occasions. On January 23, 1980, five samples were collected by the EPA and subsequently analyzed for purgeable organics. The results indicated the following:

1. Moderate to high levels of 1,1 - dichloroethane, 1,1,1 - trichloroethane, trichloroethylene, toluene and xylene are present upstream of Stepan/Olin.
2. Moderate to high levels of 1,1,2 - dichloroethylene and 1,1,2 - trichloroethane in addition to the five chemicals listed under (1) are present downstream of Stepan/Olin.
3. Therefore, some chlorinated hydrocarbons may be leaching from Stepan/Olin into the drainage ditch.

Date: 10/23/80**3. Background:****3.4 Hazards Identified or Alleged - continued**

4. Analyses of the outfalls from Stepan/Olin do not indicate significant off-site migration of contamination.

Priority pollutant samples were taken from the drainage ditch paralleling the railroad tracks on July 28, 1980. Samples taken upstream and downstream of the Stepan/Olin property indicated small amounts of purgeables generating from the site.

In summary, existing data do not support that this site is a major contributor to surface water contamination. Information contrary to this may be provided by the in-progress analysis of the "black ooze" mentioned earlier in this report and by the sampling and analysis plan recommended in Section 4 of this report. Information necessary to evaluate potential groundwater contamination is not available.

4. Recommendations:

It is highly recommended that sampling and analysis of existing wells (See Figure 2) surface water and soil be performed as outlined in the following sampling plan. The selection of well sampling points was based on groundwater data contained in the Geotechnical Engineers, Inc. report entitled Groundwater and Surface Water Study - Stepan Chemical Company, Wilmington, Massachusetts (December 6, 1978). The sampling plan should include:

1. Sampling and analysis of the following wells:

GW-2
GW-3
GW-4
GW-5
GW-7
GW-10
W-101

MASTER FILE

Date: 10/23/80

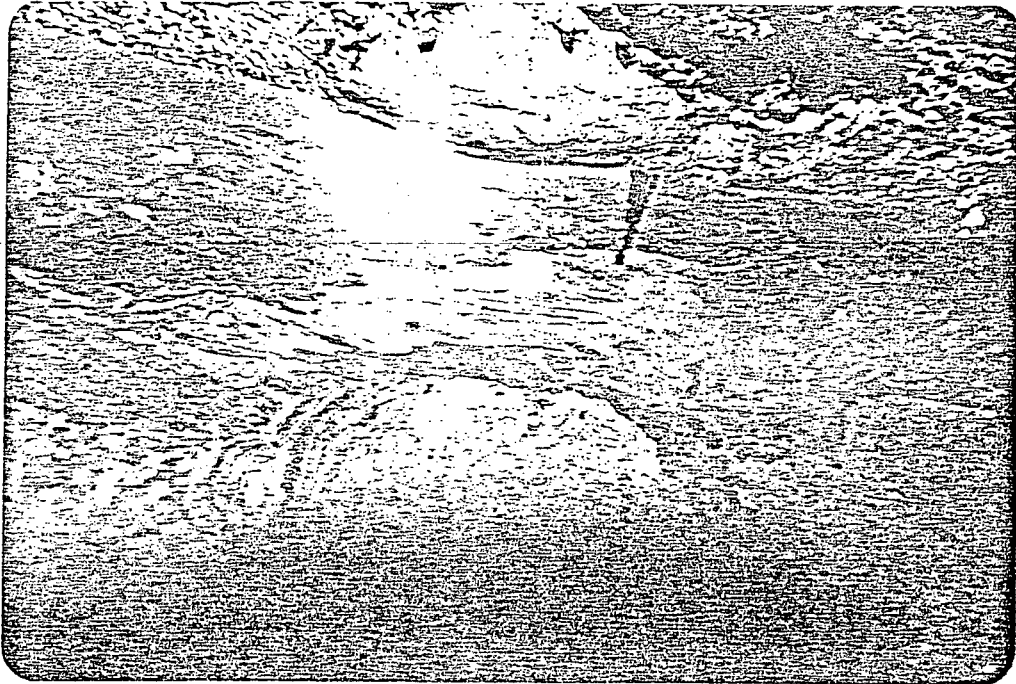


Figure 9 - Sheen resulting from
"black ooze" seeping into the
Drainage Ditch.

Date: 10/23/80**4. Recommendations - continued**

Well GW-5 has been selected for priority pollutant analysis. Well GW-10 should be sampled for background. All other wells should be sampled for volatile organics, chlorinated hydrocarbons, dioctylphthalate and nonyl and dinonyl phenol. Samples should be obtained with a bailer after at least one static volume of each well is discharged. Samples should be screened using the Century OVA.

2. A surface water sample should be taken at the outlet of the on-site drainage channel and submitted for priority pollutant analysis. Additional appropriate surface water samples should be selected during the on-site inspection. These samples should be screened for volatile organics and chlorinated hydrocarbons.
3. Soil samples should be taken near the group of six large storage tanks on the east side of the site. Samples should also be taken of the existing settling basins where the acid pits were located and of the sulfate sludge landfill.
4. A sediment sample should be taken from Center Pond (See Figure 2).

The sampling plan outlined above should indicate which of the contaminants present in the drainage ditch originate from the Olin Property.



POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION I SITE NUMBER (to be assigned by HQ)
MA 10040

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME Olin Chemicals Group Wilmington Plant		B. STREET (or other identifier) Eames Street	
C. CITY Wilmington	D. STATE MA	E. ZIP CODE 01887	F. COUNTY NAME Middlesex
G. OWNER/OPERATOR (if known) 1. NAME Mr. McBrien (Plant Manager)		2. TELEPHONE NUMBER 356-3156	
H. TYPE OF OWNERSHIP <input type="checkbox"/> 1. FEDERAL <input type="checkbox"/> 2. STATE <input type="checkbox"/> 3. COUNTY <input type="checkbox"/> 4. MUNICIPAL <input checked="" type="checkbox"/> 5. PRIVATE <input type="checkbox"/> 6. UNKNOWN			

I. SITE DESCRIPTION

Chemical plant with approx. 20 buildings and a large wooded area

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.) TDD# F-1-8006-01 (EPA) - Part of Woburn study area	K. DATE IDENTIFIED (mo., day, & yr.) 6/25/80
L. PRINCIPAL STATE CONTACT 1. NAME Dick Slein	2. TELEPHONE NUMBER 935-2160

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM <input type="checkbox"/> 1. HIGH <input checked="" type="checkbox"/> 2. MEDIUM <input type="checkbox"/> 3. LOW <input type="checkbox"/> 4. NONE <input type="checkbox"/> 5. UNKNOWN		
B. RECOMMENDATION <input type="checkbox"/> 1. NO ACTION NEEDED (no hazard) <input checked="" type="checkbox"/> 2. IMMEDIATE SITE INSPECTION NEEDED a. TENTATIVELY SCHEDULED FOR: week of Nov. 10, 9180 b. WILL BE PERFORMED BY: E&E FIT Team <input type="checkbox"/> 3. SITE INSPECTION NEEDED (low priority)		
C. PREPARER INFORMATION 1. NAME David K. Cook	2. TELEPHONE NUMBER 935-4008	3. DATE (mo., day, & yr.) 10/23/80

III. SITE INFORMATION

A. SITE STATUS <input checked="" type="checkbox"/> 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.) <input type="checkbox"/> 2. INACTIVE (Those sites which no longer receive wastes.) <input type="checkbox"/> 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)		
B. IS GENERATOR ON SITE? <input type="checkbox"/> 1. NO <input checked="" type="checkbox"/> 2. YES (specify generator's four-digit SIC Code):		
C. AREA OF SITE (in acres) 53	D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES 1. LATITUDE (deg.-min.-sec.) 2. LONGITUDE (deg.-min.-sec.)	
E. ARE THERE BUILDINGS ON THE SITE? <input type="checkbox"/> 1. NO <input checked="" type="checkbox"/> 2. YES (specify): Many plant buildings		

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X' A. TRANSPORTER	X' B. STORER	X' C. TREATER	X' D. DISPOSER
1. RAIL	1. PILE	1. FILTRATION	X 1. LANDFILL
2. SHIP	2. SURFACE IMPOUNDMENT	2. INCINERATION	2. LANDFARM
3. BARGE	X 3. DRUMS	3. VOLUME REDUCTION	3. OPEN DUMP
4. TRUCK	X 4. TANK, ABOVE GROUND	4. RECYCLING/RECOVERY	X 4. SURFACE IMPOUNDMENT
5. PIPELINE	5. TANK, BELOW GROUND	X 5. CHEM./PHYS. TREATMENT	5. MIDNIGHT DUMPING
6. OTHER (specify):	6. OTHER (specify):	6. BIOLOGICAL TREATMENT	6. INCINERATION
		7. WASTE OIL REPROCESSING	7. UNDERGROUND INJECTION
		8. SOLVENT RECOVERY	X 8. OTHER (specify):
		9. OTHER (specify):	Burial

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

Rubber blowing agents synthesized on-site. Waste historically dumped in acid pits or into surface water.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. UNKNOWN ☒ 2. LIQUID ☐ 3. SOLID ☒ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4. RADIOACTIVE ☐ 5. HIGHLY VOLATILE
☐ 6. TOXIC ☐ 7. REACTIVE ☒ 8. INERT ☐ 9. FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Process operation records identify type of waste

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
?	?	Minor	Major		
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X' (1) PAINT, PIGMENTS	X' (1) OILY WASTES	X' (1) HALOGENATED SOLVENTS	X' (1) ACIDS	X' (1) FLYASH	X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	X (2) NON-HALOGENATED SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
X (5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
Sulfate sludge			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify):		
recycled paper				ecology and environment, inc.	

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

Diocetylphthalate
 Nonyl & Dinonyl Phenol
 Volatile Organics
 Hydrazine

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

Phosphorus trichloride allegedly dumped in swamp. Burial Of unknown residues in swamp.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH	X			
3. NON-WORKER INJURY/EXPOSURE	X			from drainage ditch
4. WORKER INJURY		X		ammonia fumes
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER	X			very likely
8. CONTAMINATION OF SURFACE WATER		X		Analytical data available
9. DAMAGE TO FLORA/FAUNA		X		Large area of dead trees
10. FISH KILL				
11. CONTAMINATION OF AIR		X		Ammonia fumes Phosphorus trichloride
12. NOTICEABLE ODORS		X		Ammonia fumes Phosphorus trichloride
13. CONTAMINATION OF SOIL		X		Leak from storage tanks, alleged burial of residues
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS		X		
17. SEWER, STORM DRAIN PROBLEMS		X		Ammonia & sulfate
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- ☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): _____
☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER
☐ 10. OTHER (specify): _____

B. IN COMPLIANCE?

- ☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

- ☐ A. NONE ☒ B. YES (summarize below)

Sewer problem - ammonia & sulfates

IX. INSPECTION ACTIVITY (past or on-going)

- ☐ A. NONE ☒ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

- ☐ A. NONE ☒ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Construction	1971		New surface lagoons & sewer system

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.



POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION I SITE NUMBER (to be assigned by HQ)
MA 00430

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME unknown		B. STREET (or other identifier)	
C. CITY Wilmington	D. STATE MA	E. ZIP CODE 01887	F. COUNTY NAME Middlesex
G. OWNER/OPERATOR (if known) 1. NAME unknown		2. TELEPHONE NUMBER	
H. TYPE OF OWNERSHIP <input type="checkbox"/> 1. FEDERAL <input type="checkbox"/> 2. STATE <input type="checkbox"/> 3. COUNTY <input type="checkbox"/> 4. MUNICIPAL <input type="checkbox"/> 5. PRIVATE <input checked="" type="checkbox"/> 6. UNKNOWN			

I. SITE DESCRIPTION

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.) During routine pumping test and sampling of new well	K. DATE IDENTIFIED (mo., day, & yr.) 7/79	
L. PRINCIPAL STATE CONTACT 1. NAME Roger Rondeau (DEQE)		2. TELEPHONE NUMBER 727-2692

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM <input type="checkbox"/> 1. HIGH <input type="checkbox"/> 2. MEDIUM <input type="checkbox"/> 3. LOW <input checked="" type="checkbox"/> 4. NONE <input type="checkbox"/> 5. UNKNOWN	
B. RECOMMENDATION <input type="checkbox"/> 1. NO ACTION NEEDED (no hazard) <input type="checkbox"/> 2. IMMEDIATE SITE INSPECTION NEEDED a. TENTATIVELY SCHEDULED FOR: b. WILL BE PERFORMED BY: <input type="checkbox"/> 3. SITE INSPECTION NEEDED a. TENTATIVELY SCHEDULED FOR: b. WILL BE PERFORMED BY: <input type="checkbox"/> 4. SITE INSPECTION NEEDED (low priority)	

C. PREPARER INFORMATION 1. NAME Clara Chow	2. TELEPHONE NUMBER 223-6486	3. DATE (mo., day, & yr.) 5/15/80
--	---------------------------------	--------------------------------------

III. SITE INFORMATION

A. SITE STATUS <input type="checkbox"/> 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.) <input type="checkbox"/> 2. INACTIVE (Those sites which no longer receive wastes.) <input type="checkbox"/> 3. OTHER (specify):		(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)	
B. IS GENERATOR ON SITE? <input type="checkbox"/> 1. NO <input type="checkbox"/> 2. YES (specify generator's four-digit SIC Code):			
C. AREA OF SITE (in acres)	D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES 1. LATITUDE (deg.-min.-sec.) 2. LONGITUDE (deg.-min.-sec.)		
E. ARE THERE BUILDINGS ON THE SITE? <input type="checkbox"/> 1. NO <input type="checkbox"/> 2. YES (specify):			

IV. CHARACTERIZATION OF SITE ACTIV.

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1 UNKNOWN ☒ 2 LIQUID ☐ 3 SOLID ☐ 4 SLUDGE ☐ 5 GAS

B. WASTE CHARACTERISTICS

☒ 1 UNKNOWN ☐ 2 CORROSIVE ☐ 3 IGNITABLE ☐ 4 RADIOACTIVE ☐ 5 HIGHLY VOLATILE
☒ 6 TOXIC ☐ 7 REACTIVE ☐ 8 INERT ☐ 9 FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE		b. OIL		c. SOLVENTS		d. CHEMICALS		e. SOLIDS		f. OTHER	
AMOUNT		AMOUNT		AMOUNT		AMOUNT		AMOUNT		AMOUNT	
UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE		UNIT OF MEASURE	
X (1) PAINT, PIGMENTS		X (1) OILY WASTES		X (1) HALOGENATED SOLVENTS		X (1) ACIDS		X (1) FLYASH		X (1) LABORATORY PHARMACEUT.	
(2) METALS SLUDGES		(2) OTHER (specify):		(2) NON-HALOGENATED SOLVENTS		(2) PICKLING LIQUORS		(2) ASBESTOS		(2) HOSPITAL	
(3) POTW				(3) OTHER (specify):		(3) CAUSTICS		(3) MILLING/ MINE TAILINGS		(3) RADIOACTIVE	
(4) ALUMINUM SLUDGE						(4) PESTICIDES		(4) FERROUS SMLTG. WASTES		(4) MUNICIPAL	
(5) OTHER (specify):						(5) DYES/INKS		(5) NON-FERROUS SMLTG. WASTES		(5) OTHER (specify):	
						(6) CYANIDE		(6) OTHER (specify):			
						(7) PHENOLS					
						(8) HALOGENS					
						(9) PCB					
						(10) METALS					
						(11) OTHER (specify):					

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

Trichloroethylene
1,1,1 Trichloroethane

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY		X		closed well at Chestnut St.
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER		X		See 5
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- ☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): _____
☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER
☐ 10. OTHER (specify): _____

B. IN COMPLIANCE?

- ☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

- ☐ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

- ☐ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

- ☐ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Attempt to reduce contamination levels		Town	Contracted consulting engineer to experiment with aeration method for reducing contaminant concentrations.
Alternate Water Supply		Town	Proposed to reactivate old well which had been closed for 7 years.

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

N.B. Testing shows low levels, and therefore, the town may have this contamination problem solved by the aeration treatment.



HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION SITE NUMBER
I **MA 00430**

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME Unknown	B. STREET	
C. CITY Wilmington	D. STATE MA	E. ZIP CODE 01887

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED (If yes, complete Section III.)	X		X	X	
C. REMEDIAL ACTION NEEDED (If yes, complete Section IV.)					
D. ENFORCEMENT ACTION NEEDED (if yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)					

E. RATIONALE FOR DISPOSITION

State and local government investigating possible sources. Employing aeration to reduce contamination levels

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION (mo., day, & yr.)

G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED (mo., day, & yr.)

H. PREPARER INFORMATION

1. NAME Ruth Leabman - EPA	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
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III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

Identification of source

B. PROPOSED INVESTIGATIVE ACTIVITY (Detailed Information)

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION (mo, day, & yr)	3. TO BE PERFORMED BY (EPA, Contractor, State, etc.)	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1) _____	_____	_____	_____	_____
(2) _____	_____	_____	_____	_____
(3) _____	_____	_____	_____	_____
b. TYPE OF MONITORING				
(1) _____	_____	_____	_____	_____
(2) _____	_____	_____	_____	_____
c. TYPE OF SAMPLING				
(1) _____	_____	_____	_____	_____
(2) _____	_____	_____	_____	_____

III. INVESTIGATIVE ACTIVITY NEEDED and PART B - PROPOSED INVESTIGATIVE ACTIVITY (Continued)

d. TYPE OF LAB ANALYSIS				
(1)				
(2)				
e. OTHER (specify)				
(1)				
(2)				

C. ELABORATE ON ANY OF THE INFORMATION PROVIDED IN PART B (on front & above) AS NEEDED TO IDENTIFY ADDITIONAL INVESTIGATIVE WORK.

D. ESTIMATED MANHOURS BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES	1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES
a. EPA		b. STATE	
c. EPA CONTRACTOR		d. OTHER (specify)	

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY STRATEGY (On Site & Off-Site): List all emergency actions needed to bring site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the space below.

1. ACTION	2. EST. START DATE (mo, day, & yr)	3. EST. END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
Wtr. Sup. Closed	7/79			\$	
				\$	
				\$	
				\$	
				\$	
				\$	

B. LONG TERM STRATEGY (On Site & Off-Site): List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. EST. START DATE (mo, day, & yr)	3. EST. END DATE (mo, day, & yr)	4. ACTION AGENCY (EPA, State, Private Party)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
Aeration			Local	\$	
				\$	
				\$	
				\$	
				\$	
				\$	

C. ESTIMATED MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES	1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES
a. EPA			b. STATE		
c. PRIVATE PARTIES			d. OTHER (specify)		

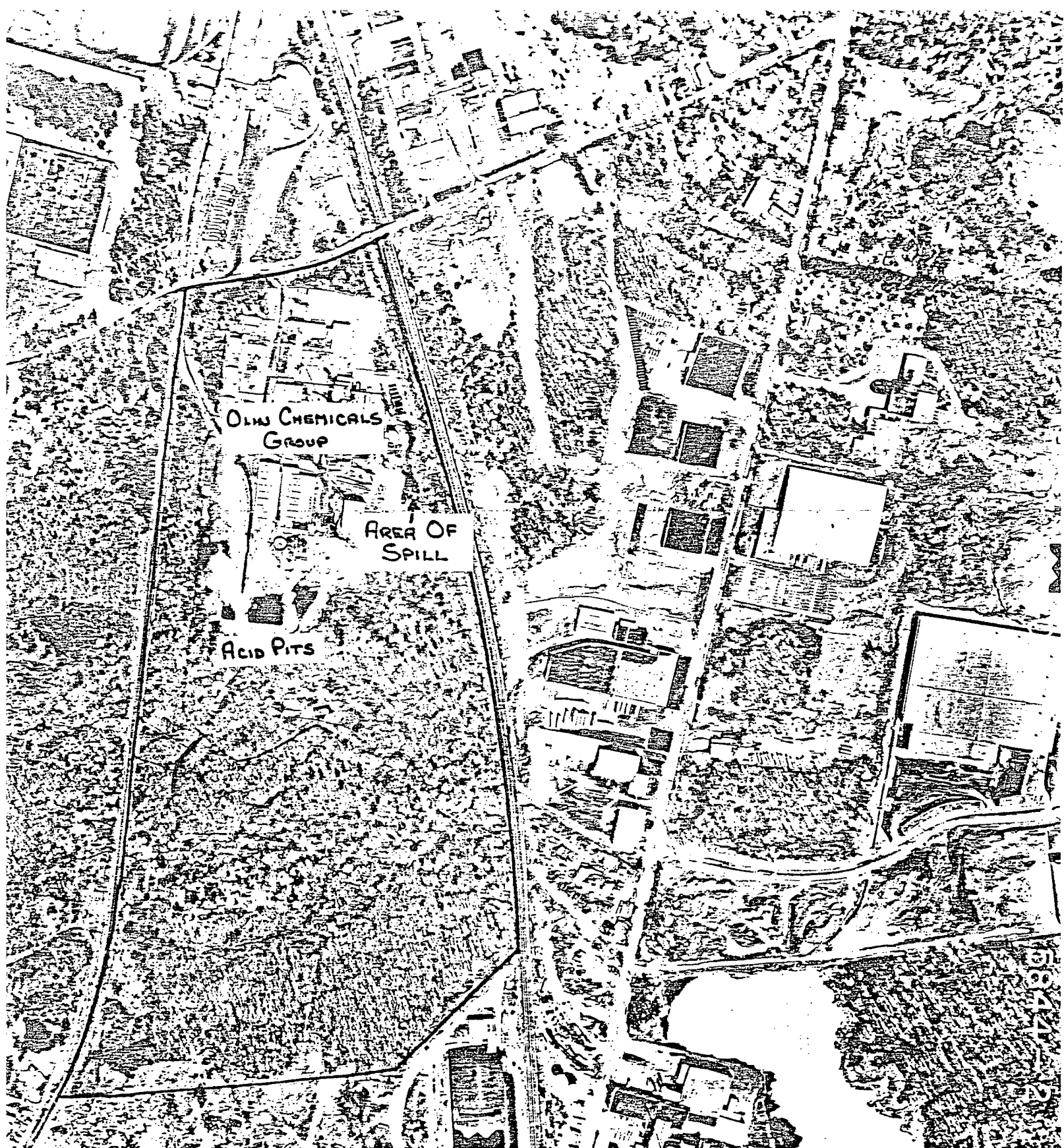
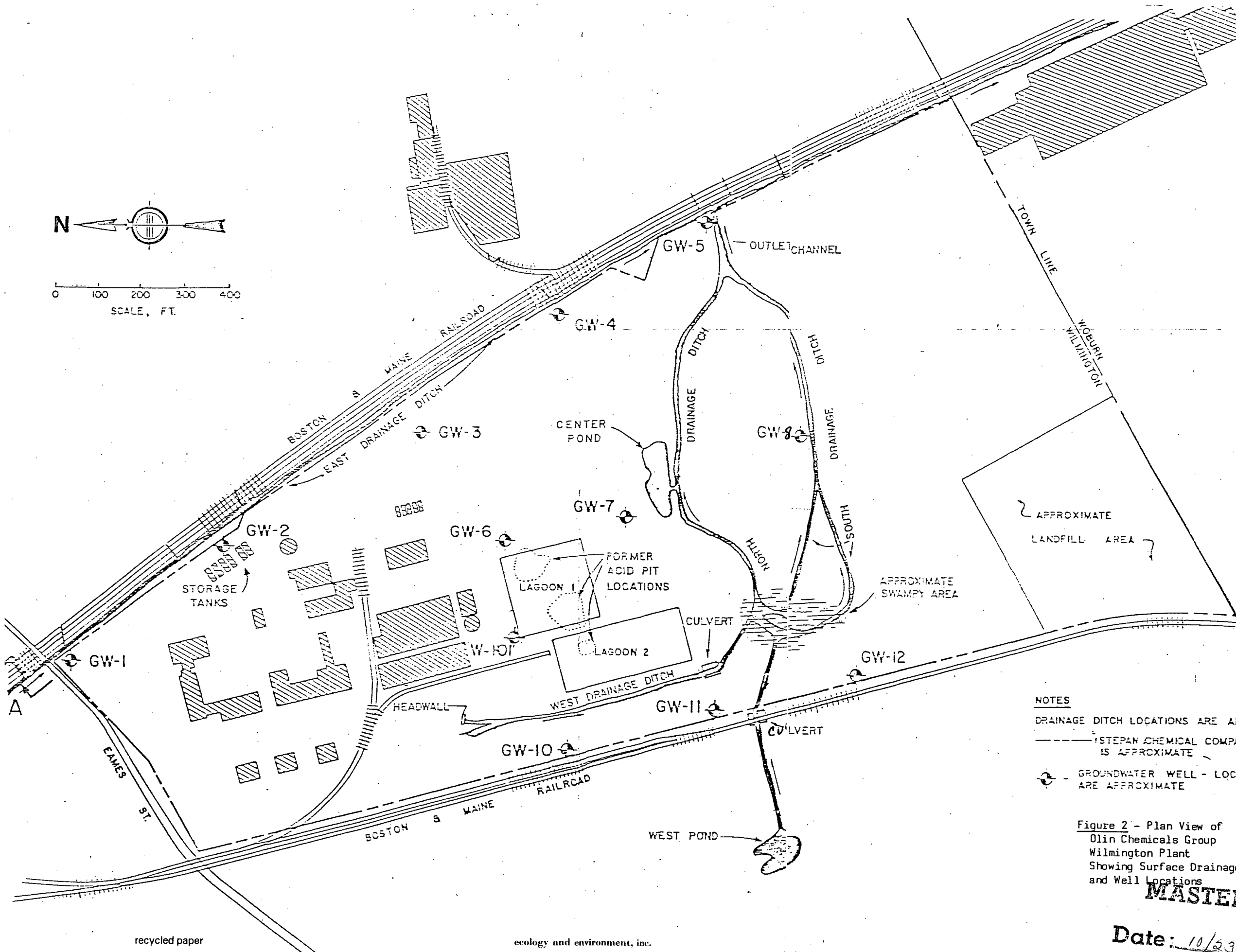
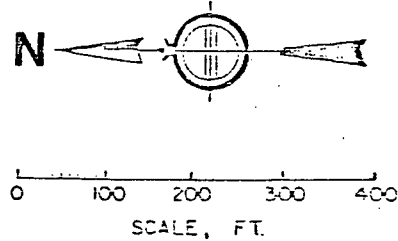


Figure 3 - April 24, 1971
Aerial Photograph Showing
the Location of the Former
Acid Pits.

MASTER FILE

Date: 10/23/80



NOTES

- DRAINAGE DITCH LOCATIONS ARE APPROXIMATE
- STEPAN CHEMICAL COMPANY PROPERTY LINE IS APPROXIMATE
- ⊙ - GROUNDWATER WELL - LOCATIONS ARE APPROXIMATE

Figure 2 - Plan View of
Olin Chemicals Group
Wilmington Plant
Showing Surface Drainage
and Well Locations

MASTER FILE

Date: 10/23/80

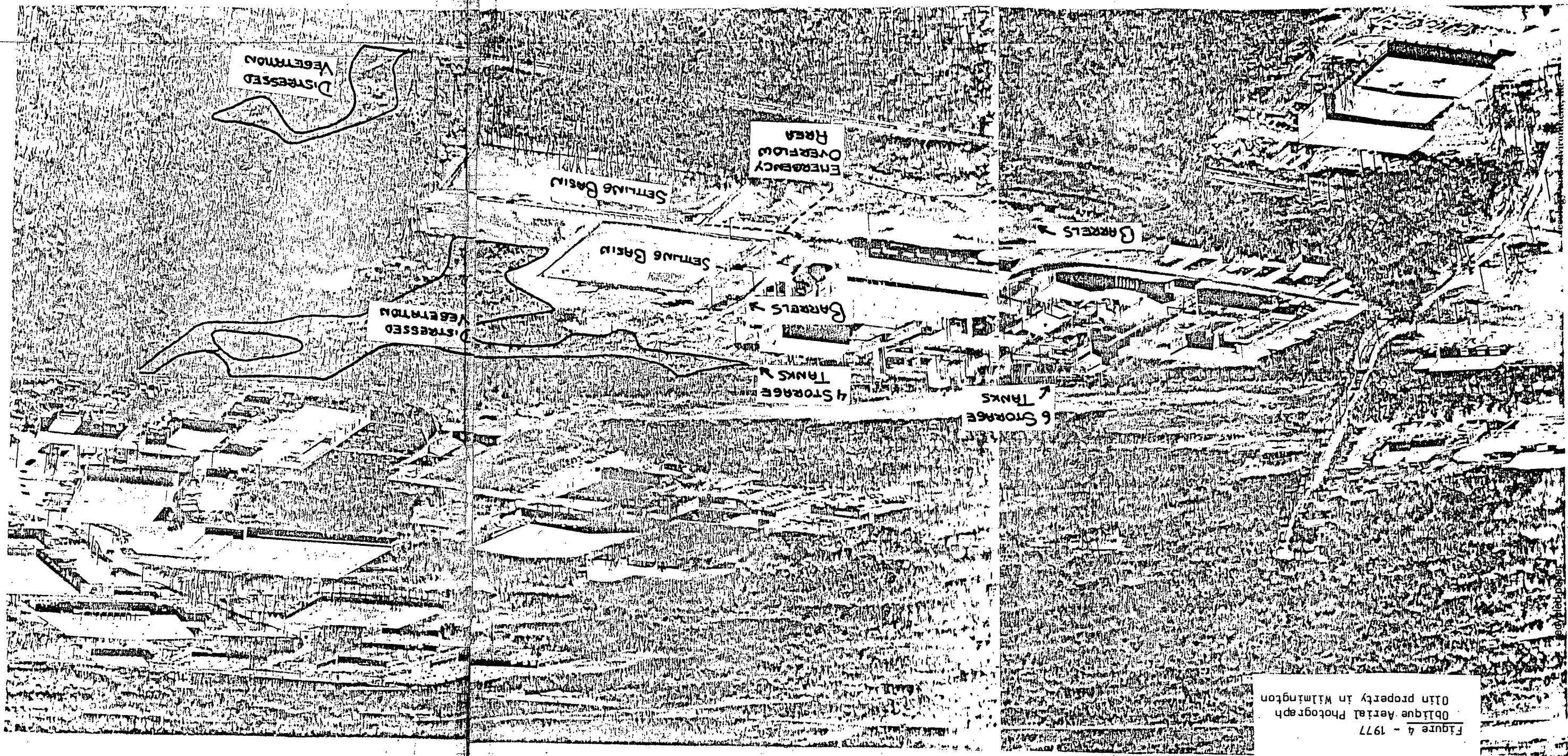


Figure 4 - 1977
Oblique Aerial Photograph
Of property in Wilmington